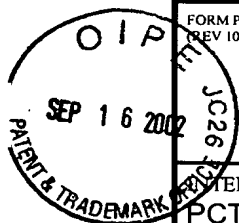


PCT#6  
01/24/02FORM PTO-1390  
(REV 10-2000)

U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE

ATTORNEY'S DOCKET NUMBER

TRANSMITTAL LETTER TO THE UNITED STATES  
DESIGNATED/ELECTED OFFICE (DO/EO/US)  
CONCERNING A FILING UNDER 35 U.S.C. 371

34420.00.0004

U.S. APPLICATION NO. (If known, see 37 CFR 1.5)  
10/088,069INTERNATIONAL APPLICATION NO.  
PCT/EPO0/08805INTERNATIONAL FILING DATE  
September 08, 2000PRIORITY DATE CLAIMED  
09/09/1999

TITLE OF INVENTION HALL SENSOR ARRAY FOR MEASURING A MAGNETIC FIELD WITH OFFSET COMPENSATION

APPLICANT(S) FOR DO/EO/US HANS-PETER HOHE et al.

Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:

1. ☐ This is a **FIRST** submission of items concerning a filing under 35 U.S.C. 371.
2. ☒ This is a **SECOND** or **SUBSEQUENT** submission of items concerning a filing under 35 U.S.C. 371.
3. ☐ This is an express request to promptly begin national examination procedures (35 U.S.C. 371(f)).
4. ☐ The US has been elected by the expiration of 19 months from the priority date (PCT Article 31).
5. ☐ A copy of the International Application as filed (35 U.S.C. 371(c)(2))
  - a. ☐ is attached hereto (required only if not communicated by the International Bureau).
  - b. ☐ has been communicated by the International Bureau.
  - c. ☐ is not required, as the application was filed in the United States Receiving Office (RO/US).
6. ☐ An English language translation of the International Application as filed (35 U.S.C. 371(c)(2)).
7. ☐ Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371(c)(3))
  - a. ☐ are attached hereto (required only if not communicated by the International Bureau).
  - b. ☐ have been communicated by the International Bureau.
  - c. ☐ have not been made; however, the time limit for making such amendments has NOT expired.
  - d. ☐ have not been made and will not be made.
8. ☐ An English language translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)).
9. ☐ An oath or declaration of the inventor(s) (35 U.S.C. 371(c)(4)).
10. ☐ An English language translation of the annexes to the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371(c)(5)).

## Items 11 to 16 below concern document(s) or information included:

11. ☒ An Information Disclosure Statement under 37 CFR 1.97 and 1.98.
12. ☐ An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.
13. ☐ A FIRST preliminary amendment.  
☐ A SECOND or SUBSEQUENT preliminary amendment.
14. ☐ A substitute specification.
15. ☐ A change of power of attorney and/or address letter.
16. ☒ Other items or information:

Form PTO1449; Information Disclosure Statement letter; 8 references; return postcard

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U.S. APPLICATION NO. (if known, see 37 CFR 1.5)		INTERNATIONAL APPLICATION NO.		ATTORNEY'S DOCKET NUMBER	
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<p>17. <input type="checkbox"/> The following fees are submitted:</p> <p><b>BASIC NATIONAL FEE ( 37 CFR 1.492 (a) (1) - (5) ) :</b></p> <p>Neither international preliminary examination fee (37 CFR 1.482) nor international search fee (37 CFR 1.445(a)(2)) paid to USPTO and International Search Report not prepared by the EPO or JPO ..... <b>\$1000.00</b></p> <p>International preliminary examination fee (37 CFR 1.482) not paid to USPTO but International Search Report prepared by the EPO or JPO ..... <b>\$860.00</b></p> <p>International preliminary examination fee (37 CFR 1.482) not paid to USPTO but international search fee (37 CFR 1.445(a)(2)) paid to USPTO ..... <b>\$710.00</b></p> <p>International preliminary examination fee paid to USPTO (37 CFR 1.482) but all claims did not satisfy provisions of PCT Article 33(1)-(4) ..... <b>\$690.00</b></p> <p>International preliminary examination fee paid to USPTO (37 CFR 1.482) and all claims satisfied provisions of PCT Article 33(1)-(4) ..... <b>\$100.00</b></p> <p style="text-align: center;"><b>ENTER APPROPRIATE BASIC FEE AMOUNT =</b></p> <p>Surcharge of <b>\$130.00</b> for furnishing the oath or declaration later than <input type="checkbox"/> 20 <input type="checkbox"/> 30 months from the earliest claimed priority date (37 CFR 1.492(e)).</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 20%;">CLAIMS</th> <th style="width: 20%;">NUMBER FILED</th> <th style="width: 20%;">NUMBER EXTRA</th> <th style="width: 20%;">RATE</th> <th style="width: 20%;"></th> </tr> <tr> <td>Total claims</td> <td style="text-align: center;">- 20 =</td> <td></td> <td>X <b>\$18.00</b></td> <td>\$</td> </tr> <tr> <td>Independent claims</td> <td style="text-align: center;">- 3 =</td> <td></td> <td>X <b>\$80.00</b></td> <td>\$</td> </tr> <tr> <td colspan="3">MULTIPLE DEPENDENT CLAIM(S) (if applicable)</td> <td>+ <b>\$270.00</b></td> <td>\$</td> </tr> </table> <p style="text-align: center;"><b>TOTAL OF ABOVE CALCULATIONS =</b></p> <p><input type="checkbox"/> Applicant claims small entity status. See 37 CFR 1.27. The fees indicated above are reduced by 1/2.</p> <p style="text-align: center;"><b>SUBTOTAL =</b></p> <p>Processing fee of <b>\$130.00</b> for furnishing the English translation later than <input type="checkbox"/> 20 <input type="checkbox"/> 30 months from the earliest claimed priority date (37 CFR 1.492(f)).</p> <p style="text-align: center;"><b>TOTAL NATIONAL FEE =</b></p> <p>Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31). <b>\$40.00</b> per property +</p> <p style="text-align: center;"><b>TOTAL FEES ENCLOSED =</b></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 70%;"></td> <td style="width: 30%;">Amount to be refunded:</td> <td style="width: 10%;">\$</td> </tr> <tr> <td></td> <td>charged:</td> <td>\$</td> </tr> </table>				CLAIMS	NUMBER FILED	NUMBER EXTRA	RATE		Total claims	- 20 =		X <b>\$18.00</b>	\$	Independent claims	- 3 =		X <b>\$80.00</b>	\$	MULTIPLE DEPENDENT CLAIM(S) (if applicable)			+ <b>\$270.00</b>	\$		Amount to be refunded:	\$		charged:	\$	<b>CALCULATIONS</b> PTO USE ONLY	
CLAIMS	NUMBER FILED	NUMBER EXTRA	RATE																												
Total claims	- 20 =		X <b>\$18.00</b>	\$																											
Independent claims	- 3 =		X <b>\$80.00</b>	\$																											
MULTIPLE DEPENDENT CLAIM(S) (if applicable)			+ <b>\$270.00</b>	\$																											
	Amount to be refunded:	\$																													
	charged:	\$																													

a. ☐ A check in the amount of \$\_\_\_\_\_ to cover the above fees is enclosed.

b. ☐ Please charge my Deposit Account No. \_\_\_\_\_ in the amount of \$\_\_\_\_\_ to cover the above fees. A duplicate copy of this sheet is enclosed.

c. ☒ The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. 22-0259. A duplicate copy of this sheet is enclosed.

**NOTE: Where an appropriate time limit under 37 CFR 1.494 or 1.495 has not been met, a petition to revive (37 CFR 1.137(a) or (b)) must be filed and granted to restore the application to pending status.**

SEND ALL CORRESPONDENCE TO:  <b>Christopher J. Reckamp</b> <b>Vedder Price Kaufman &amp; Kammholz</b> <b>222 N. LaSalle Street</b> <b>Chicago IL 60601</b>  <b>September 9, 2002</b>	 SIGNATURE: <b>Christopher J. Reckamp</b> NAME <b>34,414</b> REGISTRATION NUMBER
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
AS DESIGNATED OFFICE (DO/US)

INTERNATIONAL APPLICATION NO.

INTERNATIONAL FILING DATE

PRIORITY DATE ALLOWED

PCT/EP00/08805

8 September 2000

9 September 1999

Applicants: Hans Peter Hohe et al.

Examiner:

U.S. Serial No. 10/088,069

Art Group:

Filing Date: March 8, 2002

Atty. Docket no. 34420.00.0004

**Title: HALL SENSOR ARRAY FOR MEASURING A MAGNETIC FIELD  
WITH OFFSET COMPENSATION**

U. S. Patents and Trademark Office  
as Designated Office (DO/US)  
Box Non-fee Amendment  
Washington, D.C. 20231

*Certificate of First class Mailing*  
*I hereby certify that this paper is being sent via first class*  
*mail in an envelope addressed to: US Designated Office*  
*(DO/US), Attn: Non-fee Amendment, Assistant Comm. for*  
*Patents, U.S. Patent & Trademark Office, Washington,*  
*D.C.20231, on this date.*

*9/9/02* *Rosalie Swanson*  
Date Rosalie Swanson

**INFORMATION DISCLOSURE STATEMENT**  
**IN ACCORDANCE WITH 37 CFR §§ 1.97 AND 1.98**

Pursuant to 37 CFR §§1.97 and 1.98, Applicants hereby respectfully submit  
the following references. Applicants respectfully submit:

- I. A list of documents
- II. General remarks.

A copy of each listed document is enclosed herewith along with form PTO  
1449.

**I. Documents**

A. U.S. Patents

1. U.S. Patent No. 4,668,914 (Kersten et al.), issued May 26, 1987;
2. U.S. Patent No. 5,747,995 (Spies), issued May 5, 1998;

B. Foreign Patents

3. European Patent EP 0 548 391B1, published June 30, 1993; and
4. German Patent DE 43 02 342A1, published July 29, 1993;
5. WO 99/21023, published April 28, 1999; and
6. EP 0 704 710A1, published April 3, 1996.

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### C. Other Documents

7. Translation of International Preliminary Examination Report for Intl. App. No. PCT/EP00/08805 dated 05 December 2001.
8. Copy of International Search Report (in German) dated 21 December 2000.

## II. General Remarks

EP 0 548 391 B1 has been evaluated in the introductory portion of the specification of the present application and relates to a Hall sensor array in which two or four Hall sensor elements are used to compensate the disturbing effect of a particular crystal direction. The angular separation of the individual Hall sensor elements is fixed, lying between  $0^\circ$  and  $180^\circ$ . The angle is chosen according to the crystal direction of the semiconductor material which is used. According to EP 0 548 391 B2, each Hall element is fed from a separate current source, so that a constant current is impressed on each element. The Hall voltages tapped off at the individual Hall elements in the Hall detector are connected in parallel in a switching stage. A common value is thus imposed on the Hall voltages of the individual elements, so that compensating currents may result.

DE 43 02 342 A1 relates to a Hall sensor arrangement having four Hall sensor elements, for example. The four Hall sensor elements are arranged opposite to each other by  $90^\circ$ , wherein the individual hall sensor elements have dedicated current supply terminals and dedicated voltage-sensing terminals. In the Hall-sensor elements according to this document, the current supply electrodes extend along the whole width of the element to obtain a regular current flow. Contrary thereto, the sensing electrodes are arranged at the centers of the respective edge only. With this arrangement, a periodical switching to obtain a spinning current operation is not possible.

The submission of the above documents is not an admission that the information is analogous or otherwise material. It is respectfully requested that the above listed documents be considered and made of record in the present application.

The Commissioner is authorized to charge any fees for this Information Disclosure Statement under 37 CFR §1.17(p) to charge account No. 220259. A duplicate copy of this Information Disclosure Statement is submitted for this purpose.

Respectfully submitted,

September 07, 2002

Vedder, Price, Kaufman & Kammholz.  
222 N. LaSalle Street, Suite 2600  
Chicago, IL 60601  
(312) 609-7599  
Facsimile: (312) 609-7598



Christopher J. Reckamp

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Reg. No. 34,414